

The 9th Workshop of the Virtual Laboratory for the Earth's Climate Diagnostics Program, and the University Allied Workshop

Sep. 29—Oct. 1, 2015, Atmosphere and Ocean Research Institute, The University of Tokyo

<http://157.82.240.172/~vl/index-eng.html>

Venue

Kashiwa Research Complex

Conference Room (Room 634 & 635) on 6th Floor

Kashiwa Campus, The University of Tokyo

<http://www.aori.u-tokyo.ac.jp/access/index.html>

<http://www.aori.u-tokyo.ac.jp/english/access/index.html>

Program

September 29 (Tue)

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| 10:00-13:00 | Registration and Free discussion / Poster preparation |
| 13:00-13:15 | Opening
Masahide Kimoto
Masaki Satoh |
| | Chair: Masaki Satoh |
| 13:15-13:45 | <u>Masahiro Watanabe</u> (Invited)
Climate change research using GCMs: Recent progress and outlook |
| 13:45-14:00 | Break |
| | Chair: Masato Mori |
| 14:00-14:15 | <u>Yechul Shin</u> , Sarah M. Kang, Masahiro Watanabe
Dependence of climate response to Arctic warming on the meridional position of stationary waves |
| 14:15-14:30 | <u>Chia-Wei Lan</u> , Min-Hui Lo, Chia Chou
Contrast Responses of Seasonal Precipitation Changes over the Land and the Ocean under Global Warming |

- 14:30-14:45 Hyung-Gyu Lim, Jong-Seong Kug and Jong-Yeon Park
Impact of the chlorophyll bias on tropical mean states with bio-geophysical feedback
- 14:45-15:00 Takuro Michibata, Toshihiko Takemura
Evaluation of microphysical conversion processes for warm rain in the MIROC-SPRINTARS with satellite observations
- 15:00-15:15 Kiwoong Park, Sarah M. Kang, and Jeongbin Seo
Sensitivity of tropical responses to the latitudinal position of zonally asymmetric thermal forcing in an aqua-planet setting
- 15:15-15:30 Li-Huan Hsu, Li-Rung Hwang, Yi-Chiu Lin, and Gong-Do Hwang
The performance of typhoon forecasts and spring rainfall forecasts in Taiwan with MPAS model
- 15:30-15:45 Break
- Chair: Tomoki Miyakawa
- 15:45-16:00 Daisuke Takasuka, Tomoki Miyakawa, Masaki Satoh, and Hiroaki Miura
Topographical effects on internally produced MJO-like disturbances in an aqua-planet version of NICAM
- 16:00-16:15 Wei-Jen Tseng, Chung-Hsiung Sui, and Ming-Jen Yang
Evaluation of simulated water cycle over NW Pacific by a cloud-resolving model
- 16:15-16:30 Shi-Hou Luo, Cheng-Ta Chen, and Chung-Chieh Wang
How the different analyses forcing fields affect the tropical cyclone simulation?
- 16:30-16:45 Chien-Ming Wu
Understanding diurnal evolution of moist convection using a cloud-resolving model
- 16:45-17:00 Kazuyoshi Souma and Ryosuke Noyori
Localized heavy rainfall simulations by using a cloud resolving model that considers urban activity information in Osaka, Japan
- 17:00-17:15 Yuki Nishikawa and Masaki Satoh
A conservative topographical representation scheme in z-coordinates
- 17:15-17:30 Yuto Suzuki, Kazuhisa Tsuboki, Tadayasu Ohigashi, Takeharu Hikida, Maiko Kukiya, Keita Katsuno, Tatsuya Morino, Yoshio Owaki,

Takeharu Koketsu, and Hiroyuki Yamada

Hydrometeor characteristics of cirrus clouds in the upper outflow layer of typhoons observed by the hydrometeor videosondes

18:00-18:30 Reception (Ikoi)

September 30 (Wednesday)

9:30-9:35 Logistics

Chair: Yukari Takayabu

9:35-10:05 Andrew Marshall, Harry H. Hendon, Guomin Wang (Invited)

On the role of anomalous ocean surface temperatures for promoting the record Madden-Julian Oscillation in March 2015

10:05-10:15 Break

Chair: Kentaroh Suzuki

10:15-10:30 Pradeep Khatri, Hirotshi Irie, Tamio Takamura, and Hiroaki Kuze

Study of aerosol and cloud effects on atmospheric heat budget using SKYNET data

10:30-10:45 Hitoshi Hirose, Atsushi Higuchi, Tomoaki Mega, Tomoo Ushio, Munehisa K. Yamamoto, Shoichi Shige, Atushi Hamada

Precipitation retrievals from a new generation geostationary meteorological satellite, Himawari-8

10:45-11:00 Keita Katsuno and Kazuhisa Tsuboki

Characteristics of the precipitation band caused the heavy rain in the Tokai region on September 4, 2013

11:00-11:15 Andung Bayu Sekaranom, Hirohiko Masunaga

Observation of extreme rainfall over Maritime Continent using high-resolution TRMM-based precipitation products

11:15-11:30 Naohiro Manago, Khatri Pradeep, Hitoshi Irie, Tamio Takamura, and Hiroaki Kuze

A novel calibration method of solid view angle for improving aerosol single-scattering albedo measurement in SKYNET

- 11:30-11:45 Tatsuya Morino, Kazuhisa Tsuboki, Masaya Kato, and Taro Shinoda
Comparison of the simulated charge structure in a winter thunderstorm with hydrometeor distribution observed by polarimetric radars
- 11:45-12:00 Akinori Yamada
An estimation of oxygen isotopic ratio on sun derived from infrared spectroscopy by ACE satellite
- 12:00-13:30 Lunch
- 13:30-13:35 Opening of VL workshop
- 13:35-14:05 Masaki Satoh (Lecture talk)
Introduction to NICAM: Extended-range forecast experiments with NICAM using the K computer
- 14:05-14:15 Break
- 14:15-17:00 Lecture and Practice (VL workshop)
- 14:15-15:00 Lecture 1 (Group A) / Tutorial (Group B)
- 15:15-16:00 Lecture1 (Group B) / Tutorial (Group A)
- 16:00-17:00 Practice
- 18:00-20:00 Banquet (Oak Village, Kashiwanoha)

October 1 (Thursday)

- 9:30-12:00 Lecture and Practice (VL workshop)
- 9:30-10:15 Lecture 2 (Group A) / Tutorial (Group B)
- 10:30-11:15 Lecture2 (Group B) / Tutorial (Group A)
- 11:15-12:00 Practice
- 12:00 Closing

Posters

- P1 Shahid Mehmood, Huang-Hsiung Hsu
Performance of RegCM4.1 in simulating extreme precipitation events
- P2 Hien X. Bui, Chia-Chi Wang, Wei-Liang Lee, and Chia Chou
The Role of Shallow Convection in Tropical Climate: Moist Static Energy Framework
- P3 ChiaYing Tu, Wan-Ling Tseng, Yung-Yao Lan, Ben-Jei Tsuang, Huang-Hsiung Hsu
Improving MJO Simulation in AGCM by Coupling SIT One Dimensional Ocean Model
- P4 Yi-Chi Wang, Hua-Lu Pan, and Huang-Hsiung Hsu
Impacts of Convective Triggering on the Diurnal Rainfall Cycle
- P5 Mu-Hua Chien, and Chien-Ming Wu
Representation of topography by partial steps using the immersed boundary method in a vector vorticity equation model (VVM)
- P6 Po-Shumn Hsu, Li-Huan Hsu, Chung-Hsiung Sui
A Modeling Study of Multi-Scale Nature of Tropical Disturbances with MPAS
- P7 Chisa Iwasaki, Sachiko Hayashida, Ryoichi Imasu, Akiko Ono, Tatsuya Yokota, Isamu Morino, Yukio Yoshida, Oshchepkov Sergey, Bril Andrey, and TCCON Partners
Validation of GOSAT SWIR XCO₂ and XCH₄ retrieved by PPDF-S method
- P8 Woosub Roh, Masaki Satoh, and Tomoe Nasuno
Improvement of microphysics in NICAM using TRMM and a satellite simulator
- P9 Tomoki Ohno, Masaki Satoh, and Yohei Yamada
Relationship between eyewall slopes, inner-core structures, and intensities of TCs
- P10 Hiroyasu Kubokawa, Masaki Satoh, Masatomo Fujiwara
Influence of topography on temperature variations in the Tropical Tropopause Layer
- P11 Yohei Yamada, Masaki Satoh, Masato Sugi, Chihiro Kodama, Akira T. Noda, Masuo Nakano, and, Tomoe Nasuno
Response of tropical cyclone structure to a global warming using

NICAM

- P12 Junya Uchida, Masato Mori, Hisashi Nakamura, Masaki Satoh, Kentaroh Suzuki, and Teruyuki Nakajima
Error analysis of a non-hydrostatic stretched-grid global atmospheric model
- P13 Atsushi Hamada, Yukari N. Takayabu, Chuntao Liu, and Edward J. Zipser
Weak linkage between the heaviest rainfall and tallest storms
- P14 Nagio Hirota, Yukari N. Takayabu, Masaya Kato, and Sho Arakane
Roles of an Atmospheric River and a Cut-off Low in the Extreme Precipitation Event in Hiroshima on August 19, 2014
- P15 Yu Someya, Ryoichi Imasu, Naoko Saitoh, and Kei Shiomi
Comparison of cloud detection performances of modified CO₂ slicing method and Chi-square method using GOSAT-TIR spectra